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57TH

ANNUAL FINANCIAL SURVEY

OF THE

RIGID PAPER BOX INDUSTRY

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Issued for The Use of Members of
NATIONAL PAPERBOX & PACKAGING ASSOCIATION, INCORPORATED
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57th ANNUAL FINANCIAL SURVEY

of the

RIGID PAPER BOX INDUSTRY
Covering the year 1981

I. THE 1981 SURVEY:

Several changes have been made in the procedures used in past years to analyze the financial survey data from NP&PA members. First, we have restated the annual estimates of the Rigid Paper Box Industry sales to be consistent with the 1977 Census of Manufacturers data. Using this data point and the year-to-year sales volume changes reported by NP&PA members, we projected annual sales back to the year 1967 and forward to this past year. Second, we selected a different index as a benchmark to measure the extent of inflation's impact. The Producer's Price Indexes for Pulp, Paper and Allied Products from 1967 = 100 to 1981 = 273.7 were used instead of the Wholesale Price Indexes for All Industries. We believe the Producer's Price Index to be a more representative measure of the price changes initiated by R.P.B. manufacturers. Third, we revised the four sales size categories for grouping NP&PA member survey data. The sharply rising sales indexes since the mid-70's led us to change the sales size boundaries which had been used in past reports. The new sales size categories are as follows:

$0 - $825,000
$825,000 to $2,000,000
$2,000,000 to $3,500,000
$3,500,000 and Above

Estimates of R.P.B. Industry-wide performance are based upon a weighted average of the performance of NP&PA companies in each sales category. In order to have a comparison base for the 1981 industry-wide performance estimates we reanalyzed the 1980 data using the new sales size categories. These 1980 estimates are presented in Table 3 and Chart 3.

It has been your Association's belief that these Financial Surveys and projections of the R.P.B. Industry performance statistics are valuable to the executives who are seeking an externally oriented benchmark of their company's performance. This 57th Survey provides an extensive appraisal of the past year's economic and industry performance indicators. By comparing your company's performance (as detailed in the computer-prepared personalized Company Supplement) with that of the total Industry, or with a specific geographic area or sales size, you can better determine your company's goals and alternative improvement actions needed to reach those goals.

II. BUYING A PERSONAL COMPUTER - PLANNING FOR THE PLUNGE

It would be very surprising if most of the NP&PA member executives have not already considered or are not now examining the potential of the personal computer in their businesses. Magazine and television advertisements lead one to conclude that the personal computer is on the threshold of transforming the way a manager is to manage.

A personal computer can be defined as one that costs less than $5,000, is compact, can be utilized without specialized knowledge, and is owned and operated by a person. As reported by my colleague, Professor James R. Freeland, the "sales and shipments of personal computer hardware are displaying astonishing growth...30% to 50% per year with most of the growth occurring in the professional and business markets."[1]

Personal computers are being used to perform a variety of tasks ranging from word processing and records management to production planning and materials control to budgeting and scenario analyses. The managerial uses are so fascinating and the tool is so inexpensive that we find numerous small business managers buying the personal computer without thorough planning.

Planning For The Plunge[2]

There are many important decisions involved in the purchase and initial use of a microcomputer in any small business. Naturally, the purchaser must be acquainted with some computer terminology and "buzz words", and he must thoroughly investigate the micro market to see what is available. However, it is the first step, Planning for the Plunge, that gives executives the greatest difficulty. In most cases, executives recognize general needs in their company-for more efficient paperwork flows, faster reporting, and more intelligent decision-making-that a microcomputer can fill.

Unfortunately, the first step many people take in buying a micro is buying a micro. Managers who may agonize for weeks over the formulation of the best means to reduce inventory or to improve the accounts receivable management tasks seldom take the same care and time to develop a clear idea of what they want or need a personal computer for. As a result, many

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[1] James R. Freeland, "Can A Personal Computer Really Help You?" forthcoming in Business Horizons, January 1983.

[2] Prepared for the 57th Annual Financial Survey by John Ford, The Colgate Darden Graduate School of Business Administration, University of Virginia, June 1982.

perfectly good personal computer investments are on the corner table gathering dust and not being used by the management or staff in their day-to-day jobs. The following paragraphs discuss some of the more important points to consider when and if you decide to plunge.

Before going to talk to a salesman (and you should talk to at least three, just like buying a car), you should make a list of specifics--the exact job the computer should be doing for your company situation. What it does best is provide information for you to use in the day-to-day planning and control of your business. Keep this fact in mind as you make your list. For example, rather than listing "Reduce days outstanding accounts receivable by 10%" as a criterion, say "Provide daily listings of past due accounts and shipments to track fast and slow paying customers." The latter criterion is much more in line with a computer's ability since it can store and retrieve large quantities of information easily and can display this information for you and your staff to analyze. You, the purchaser, must develop specific statements of what you want to accomplish. How the computer does it is not as important since the salesman, armed with your list of criteria, can tell you which system is best for your needs.

Determine who in your firm will use, or train users of the microcomputer before you buy it. If no one but you has any interest or enthusiasm for the machine, and you get busy with something else, the computer will soon be less than a useful tool. Most people, clerical and managerial, know very little about computers, and many are even somewhat frightened by them. Bringing a personal computer into an office can produce considerable anxiety in the minds of the office staff who do not want to look foolish in front of the machine and fear that it might be there to replace them. If you are the only enthusiast in the place, be certain to explain the advantages to your staff. Be able to explain in plain English what the machine is there for, what it can do, and who will be using it. Clerical workers especially can benefit from using a micro in an office since such skills build considerable job satisfaction and motivation. Once you are getting good results out of your computer, other people in the firm will become more convinced.

It's important to note that none of your employees will need to know how to program the computer. They only need to be familiar with the programs (software) your firm will be using. Some computer stores offer classes in computer programming, which might be interesting to some employees but are not at all necessary to get good use out of your machine. Most of the training you will need, though, will be in the daily operation of the machine (how to turn it on and off, how to care for the system, etc.). The best computer is the one which is easiest to use and

to ask questions about. More and more outlets are providing telephone lines and personnel devoted to answering questions from users. Be sure to ask the salesmen you talk to about these services.

Software, the programs and instructions that tell the computer how to do the jobs you want it to do, is just as important as the machine itself. Most software is "menu-driven": the computer asks what it should do next by presenting a list of choices for the operator to select from. This feature makes it difficult for the operator to feel threatened or to forget which step comes next.

Choosing software can be even more difficult than choosing the micro. Prices can vary from $20 to as high as $5,000, depending on the use. Custom programs are naturally more expensive than canned (off the shelf), but canned software is usually good for everyone and perfect for no one. The sales representatives can tell you if anyone in your area is using any software similar to what you need, and usually can provide you with a list of customers already using the software or hardware package you want to buy. Talking with someone who already has a microcomputer or who is using a program you are interested in is an excellent opportunity to learn firsthand how effective or useful this particular machine or program can be to you. Try to find out what this person would do differently if he was in your position. He will be an understanding source of information since he was once in the position you are now. He may also know some things about his machine that the salesmen might neglect to mention during his pitch.

Some programs, such as VISICALC, are considered essential for the executive. VISICALC, short for VISIble CALCulator, is the equivalent of an electronic spread-sheet. A partial list of business uses includes cash-flow forecasting, materials and labor requirements planning, and profit and loss/balance sheet consolidation and analysis. The great advantage of VISICALC is that you do not need to erase anything to change an assumption or a value anywhere on the sheet. The computer makes the changes for you and allows you to play "what-if" by automatically recalculating all the numbers. If you have a printer (absolutely essential for any business application, they cost from $400 up), you can print out your finished analysis for a report or future reference.

Most important in your computer planning and investigation is that you understand what you are talking about. Once you know what you want the computer to do, and you explain it to the salesman, he must tell you how his computer can satisfy your needs. Inevitably, certain "buzz words" will creep into the

conversation--this is natural and should not put you off. Remember, this salesman probably had not even heard these words three years ago. If the discussion gets over your head, interrupt and make him explain in English what he is talking about. The only bad question about computers is the one that remains unasked.

III. 1981 AND BEYOND

1981 Economic Performance and The 1982 Outlook (Table 1)

The U.S. economy in current dollars of Gross National Product grew 11.4% during 1981. This growth, for most part, was fictitious in the sense that it was accounted for primarily by inflation, which averaged 10.3% when measured by changes in the Consumer Price Index for Urban areas. Real dollar growth, though a mere 0.2% was better than the 0.2% contraction during 1980.

The growth was not steady over the year. Economic performances in the second and the fourth quarters were below those in the first and the third quarters, respectively. Nominal Disposable Personal Income followed the same pattern though real DPI averaged a 0.3% growth through the first three quarters and zero growth during the fourth. This, in turn, affected Personal Consumption Expenditure which showed a wavy quarterly pattern while averaging a 0.28% quarterly growth. Consequently, the industrial production indices registered low growth (2.5% to 2.7%) and manufacturing capacity utilization dropped to 78.5%.

Investors, as a class, came out worse off, for Proprietor's Income grew just 3.2% over the year and failed to keep up with inflation. Though annualized inflation was down to single digit levels by the fourth quarter, the prime rate did not drop as much, though the end-of-the-year rate of 15.75% was undoubtedly better than the beginning of the year rate of 21.5%.

The first quarter of 1982 marked the trough of the recession that the economy had entered in July, 1981. The real GNP shrank 3.9% on an annualized basis and unemployment touched a post war record of 9%, while industrial capacity utilization dropped to a low of 71% in March, 1982. Grim though this may seem, there are reasons for some optimism that the turnabout will begin in July and the GNP will register growth, albeit anemic, of 3% during the second half of 1982. First, the 3.9% contraction occured largely due to a $40 billion (annualized) liquidation of inventory; final sales actually rose during the quarter, indicating consumer confidence. Now that the inventory levels are relatively low,

TABLE 1

HOW VARIOUS ECONOMIC INDICATORS PERFORMED

IN 1981

(Current Dollars Unless Otherwise Stated)

	1981	1980	% Change
Gross National Product (1972 $)	1510.3	1480.7	0.2
Gross National Product (current $)	2925.5	2626.1	11.4
Personal Consumption Expenditures	1857.8	1672.8	11.1
Gross Private Domestic Investment	450.5	395.3	14.0
Nonresidential	328.9	296.0	11.1
Residential	105.5	105.3	0.2
Government Purchases of Goods and Services	591.2	534.7	10.6
National Personal Income	2404.1	2160.2	11.3
Wage and Salary Disbursements	1482.8	1343.7	10.4
Other Labor Income	154.1	137.1	12.4
Proprietor's Income	134.8	130.6	3.2
Disposable Personal Income	2016.0	1821.7	10.7
Unemployment Rate (%)	7.6	7.1	0.5
Total Industrial Production:			
Mfg. Mining Utilities, 12 months Index (1967 - 100)	151.0	147.0	2.7
Total Mfg. Production Index (1967 - 100)	150.4	146.7	2.5
Paper & Allied Products Index (1967 - 100)	155.0	151.1	2.6
Wholesale Price Index for Pulp Paper & Allied Products (1967 - 100)	273.8	249.2	9.9
Civilian Employment (Millions)	100.4	99.3	1.1
Capacity Utilization - Total Mfg.	78.5	79.1	-0.6

production is likely to increase throughout the rest of the year. Second, the marked drop in inflation has increased the real purchasing power of consumers: Personal Consumption Expenditure rose by 9.6%. Third, the stock market showed a five week upswing during April and early May, the longest in recent years. Fourth, housing starts have increased modestly for five consecutive months despite high mortgage rates, and new orders for durable goods (non-defense) have risen for two consecutive months.

Interest rates hold the key to the strength and length of the recovery; sustained growth will not be possible unless the prime rate falls. This is because businesses will shy away from tying up capital in inventory and going in for capital expenditures, and house building will remain slack as long as the real interest rate (nominal rate minus inflation) remains abnormally high. The rates are likely to drop slowly as liquidated inventory and higher depreciation charges made possible by the Economic Recovery Act of 1981 increase cash flows. Besides, the July 1 tax cut will give the consumer $35 billion more to save and spend. These will, for a time, decrease the pressures on the rates. With recovery, however, the demand for credit will increase and the rates will rise slightly. By the end of the year, they will reach levels somewhat below the December 1981 level of 15.75%. This, of course, assumes that a budget compromise which keeps the deficit below $110 billion in 1982 is worked out and that the Fed maintains its policy of tight money supply. A larger deficit would increase the strain on the capital market and cause the rates to rise, while increased money supply would fuel inflation. In either case, the modest growth projected would be stymied.

Unemployment will remain high, about 9%, while inflation will stabilize at approximately 5% by the end of the year.

IV. THE R.P.B. INDUSTRY'S ECONOMIC PERFORMANCE IN 1981 SALES VOLUME (Table 2 and Charts 1 and 2).

Two important changes have been introduced in the data used to analyze the R.P.B. Industry's economic performance in 1981. First, the Annual Dollar Sales Series issued by the NP&PA has been pegged to the 1977 Industry sales estimated by the National Bureau of Census in its 1977 Census of Manufacturers. This change was necessitated by the fact that during the past few years, the dollar sales estimates made by the association had diverged significantly from the estimates made by the Census Bureau. The Bureau's 1977 estimate of $394,900,000 was presumed to be more accurate, and was, therefore adopted. Second, the

TABLE 2

HISTORICAL SALES AND PRODUCTION SERIES

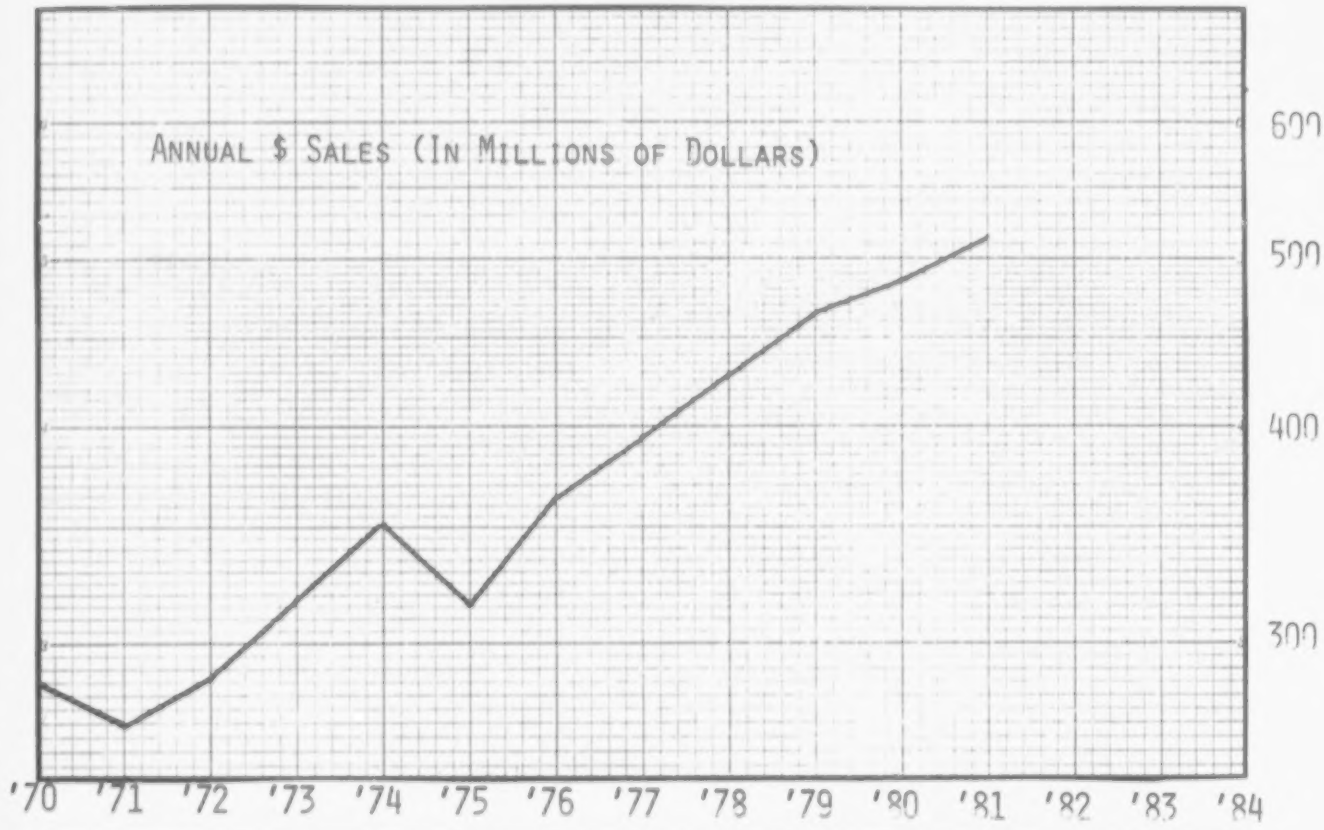
Year	(1) R-P-B Industry's Annual Sales	(2) Year-to-Year % Change	(3) R-P-B Inds. $ Sales Indexes (1967 = 100)*	(4) Pulp, Paper & Allied Products Prod. Price Indexes (1967 = 100)	(5) R-P-B Production Indexes (1967 = 100)
1967	$258,944,000	+ 2.4	100.0	100.0	100.0
1968	276,552,000	+ 6.8	106.8	101.1	105.6
1969	286,231,000	+ 3.5	110.5	104.0	106.2
1970	284,514,000	- 0.6	109.9	108.2	101.6
1971	269,719,000	- 5.2	104.2	110.1	94.6
1972	286,981,000	+ 6.4	110.8	113.4	97.7
1973	317,975,000	+10.8	122.8	122.1	100.6
1974	351,999,000	+10.7	135,9	151.7	89.6
1975	316,799,000	-10.0	122,3	170.4	71.8
1976	364,635,000	+15.1	140.8	179.4	78.5
1977	394,900,000	+ 8.3	152.5	186.4	81.8
1978	428,467,000	+ 8.5	165.5	195.6	84.6
1979	464,458,000	+ 8.6	179.4	219.0	81.9
1980	484,430,000	+ 4.3	187.1	249.2	75.1
1981	516,887,000	+ 6.7	199.7	273.7	73.0

1967-1981 Average
Annual Growth Rate: 4.88%

1985 Projected Sales**: $625,412,000

*Obtained by dividing each year's sales by $258,944,000, the sales in the base year, 1967.
**Projection assumes that the annual average growth rate of 4.88% is maintained during the years 1982 to 1985.

CHART 1 - R-P-B INDUSTRY'S DOLLAR SALES & SALES INDEXES: SEMI-LOG SCALES



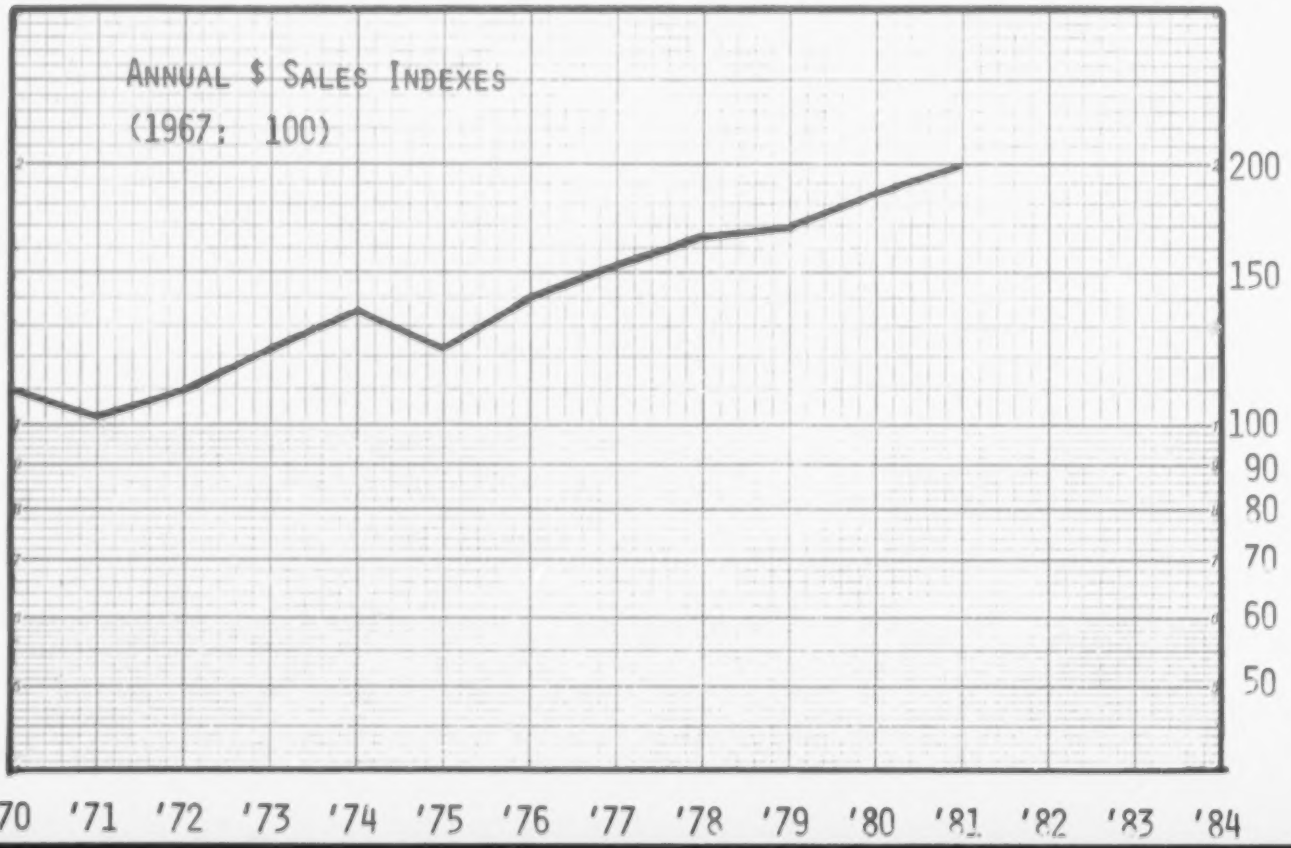
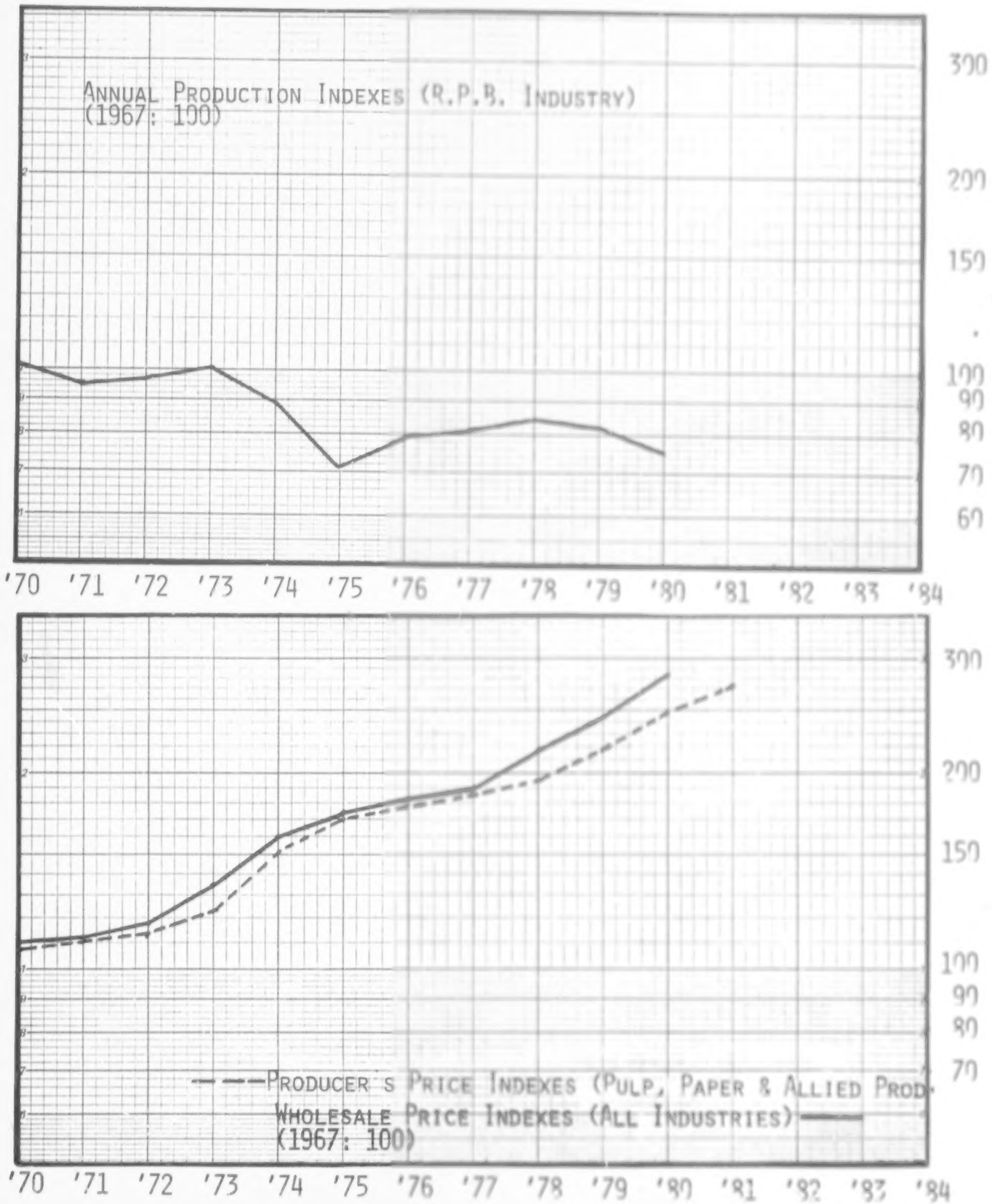


CHART 2 - WHOLESALE PRICE INDEXES & R.P.B. INDUSTRY'S PROD.
INDEXES: SEMI-LOG SCALES



Producer Price Index for Pulp, Paper and Allied Products has been used instead of the Wholesale Price Index for All Industries to determine the physical volume of goods shipped (relative to the 1967 volume) by the industry. The Producer Price Index, being specific to the paper products industry, is perceived to be a more representative measure of the price changes initiated by R.P.B. manufacturers. Table 2 and Charts 1 and 2 have been reworked to reflect these two changes.

Industry sales, expressed in current dollars, grew for the sixth consecutive year during calendar year 1981. As shown in column 2 of Table 2, sales during the last year grew 6.7% over the 1980 sales and touched $516,887,000. This growth was higher than the average growth for the last fifteen years, 4.88%.

The growth in sales dollars can be decomposed into growth in volume of goods shipped and the increase in prices due to inflation. In fact, sales dollar growth equals volume growth multipled by the average price inflation. The decomposition of the dollar growth has been carried out in columns 3, 4, and 5 of Table 2.

In column 3 (and in Chart 1) industry dollar sales for all years subsequent to our chosen reference year (1967) have been expressed as a percent of the dollar sales in 1967. The sales index for any given year is computed as:

$$\text{sales index} = \frac{\text{annual dollar sales} \times 100}{\text{1967 dollar sales}}$$

The 1981 sales index of 199.7, therefore, indicates that the dollar value of sales during 1981 was almost exactly double the sales volume in 1967.

The Producer Price Indices listed in column 4 (also see Chart 2) indicate how the average price received by producers of paper-related products varied with respect to the average price received by the producers in 1967. These indices were computed by the Commerce Department as:

$$\text{Producer Price Index} = \frac{\text{Average price received by the producers for a representative set of goods sold by the industry to the wholesaler market}}{\text{Average price received for the same set of goods in 1967.}} \times 100$$

Clearly, the wholesale price received by the paper products industry has risen faster than the sales volume of the R.P.B. manufacturers over the period 1967-1981.

If the Producer Price Indices were accepted to be representative of the price increases, relative to 1967 prices, received by R.P.B. manufacturers, then the R.P.B. Production Indices (see Column 5 and Chart 2), computed as:

$$\text{R.P.B. Production Index} = \frac{\text{R.P.B Industry Sales Index (Column 3)}}{\text{Producer Price Index for Pulp, Paper and Allied Products (Column 4)}} \times 100$$

would indicate the variation in the volume of goods sold by the industry relative to the sales volume of 1967. Last year, the volume was 73% of the 1967 volume, down 2.1 percentage points from the year before.

The data and analysis presented in Table 2 and Charts 1 and 2 reflect country-wide averages. Performance by geographical regions could be substantially different, as indicated by the 1981 sales growth data given below; the South and the Metropolitan regions posted gains far in excess of the national average of 6.7%.

Billings: Geographically Segregated

Division (Sector)	Gain Over 12 Months, 1981 vs. 1980
NE	- 1.4%
East (Empire)	-16.2%
East (Central)	-12.2%
Metropolitan	+19.8%
South	+23.9%
MW (Midwest)	- 4.6%
MW (Western)	+11.6%
Pacific Coast	+ 7.9%

Comparative Production Performance of the R.P.B. Industry and Other Paper Related Industries During 1981/1980

The production indices of the R.P.B. Industry for the years 1980 and 1981, derived in Table 2, are presented below along with the indices of other paper products industries. The indices of the other industries were obtained from the Federal Reserve Board's data base; since the R.P.B. Industry is, in fact, a segment of the Paperboard Containers Industry, its indices are not separately reported.

Industry	Production Indices 1981	1980	% Changes 1981/1980	1980/1979
Rigid Paper Box	73.0	75.1	-2.1	-6.8
Paper and Products	155.0	151.0	+4.0	+0.01
Paperboard	154.4	150.2	+4.2	+2.7
Building Paper and Board	82.1	88.1	-6.0	-24.3
Paperboard Containers	150.0	148.8	+1.2	-3.3
Converted Paper Products	173.5	168.8	+4.7	+2.8

A comparison of the changes in the indices during 1981 over 1980, and 1980 over 1979 shows that paper-related products weathered the recession much better in 1981 than in 1980. This can be deduced from the fact that none of the decreases in the indices were as severe as they were in 1980/79 while the increases were marginally better. A notable feature is that the Paperboard Containers Industry showed an increased production index value while the R.P.B. segment of the industry showed a decrease of 2.1 percentage points.

V. PROFILES OF THE R.P.B. INDUSTRY'S PERFORMANCE

An important change made in this year's report is in the classification of the survey respondents by sales size. In past years, companies were classified as belonging to one of the following four sales categories: $0-$275M, $275M-$550M, $550M-$825M and $825M+. The steadily increasing dollar sales values of individual companies has, however, made this classification obsolete. In its place, a new classification with the categories $0-$825M, $825M-$2000M, $2000M-$3500M and $3500M+ has been adopted.

Due to the absence of the survey or data base pertinent to the years prior to 1980, key ratios covering the period 1970-1979 could not be recomputed using the new classification procedure. The 1980 data, reported in the 56th Annual Financial Survey, was, however, reanalyzed using the new classifications. Comparisons of the R.P.B. Industry's performance during 1980 as calculated by the two classification procedures revealed only a small difference in each of line items 1-10 in Table 3. These differences can be seen by comparing Table 3 from this year's and last year's Report.

Profit Performance (Table 3 and Chart 3)

Industry profit as estimated from the NP&PA survey data, dropped 17% from the $30,519,000 the year before to $25,327,000 in 1981 despite a 6.7% sales increase. This drop was directly attributable to a lower industry profitability: Net Profit Before Taxes (NPBT) as a percentage of sales dropped from 6.3% in 1980 to 4.9% in 1981. If the 6.3% profit rate had been maintained in 1981, industry profits would have risen 6.7% to over $32.5 million.

As indicated in Table 3, the lower profitability was due to higher manufacturing and non-manufacturing expenses. Materials, Factory Payroll and Manufacturing Expenses rose, increasing the Cost of Sales by 1.7% points while Non-Manufacturing Operating Expenses rose by 0.2% points. An increase of 0.6% points in extraordinary income (not related to sales of factory produced goods) helped lower the total Non-Manufacturing Expenses.

The increase in Factory Payroll was due to higher direct labor expenses, which rose a full percentage point. Improved performance on supervision and indirect labor, however helped keep the Payroll increase down to 0.6% points. It is, of course, possible that the higher direct labor expense was due in part to reduced supervision and indirect labor expenses.

The small overall increase of 0.2% points in the Non-Manufacturing Operating Expense belies the substantial changes that affected its components. Delivery expenses rose 0.9% points while General and Administrative expenses rose 0.5% points. The industry, however, did well to reduce the third component, selling expenses by a full percentage point. The breakdown for the Non-Manufacturing Operating expenses for 1981 is given in Table 4.

The industry performed better than it did in 1980 on a number of performance measures. Gross Overhead per Direct Labor fell by 20.2% points in 1981. Even the ratio of the overhead expense to material and direct labor expense was 6.5% points lower. Administrative and General Expenses relative to Direct Labor expenses also fell. These improvements point to a leaner and potentially more efficient industry. The trends for several key ratios are shown in Chart 3. Note that the 1980 data for the Key Ratios as calculated by the new sale classifications are displayed on the Chart as an "X" point.

The industry also utilized its asset base a lot better in 1981 than it did in 1980. Net Sales to Total Assets rose 0.48 points to 1.67 and was instrumental in bringing about an improved ROA (8.2% versus 7.6% in 1980) despite a lower return on sales.

TABLE 3

GENERAL SUMMARY OF INDUSTRY-WIDE PERFORMANCE MEASURES

FOR 1981 AND 1980

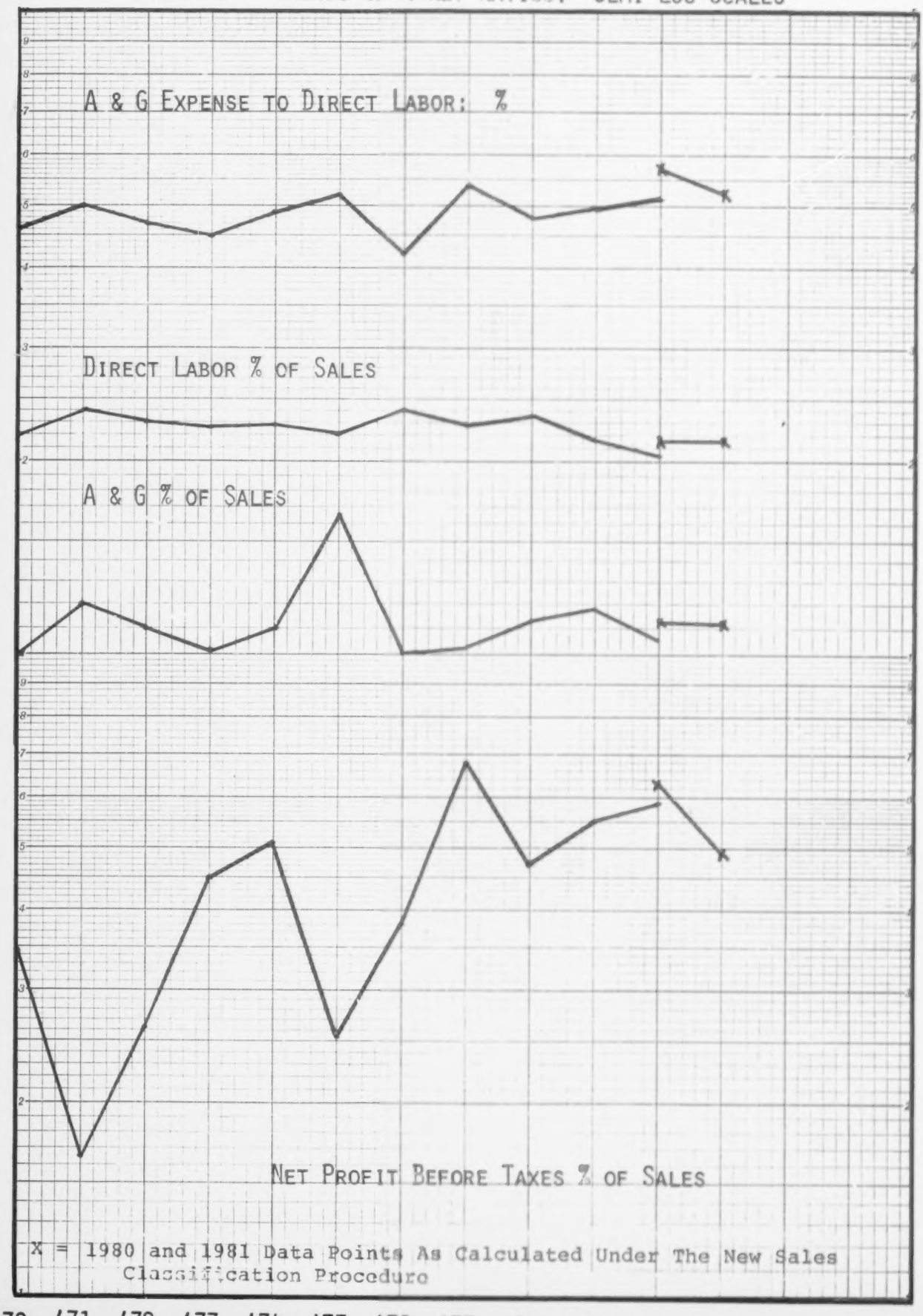
Item	1981	1980	1981/1980 % Change
Industry Sales	$516,887,000	$484,430,000	+ 6.7%
Sales Index (1967 = 100)..	199.7	187.1	+ 6.7%
Production Index (1967 = 100)	73.0	75.1	- 2.1%
Industry Profits (Before taxes)	25,327,000	30,519,000	-17.0%

Condensed Operating Statement Data as a Percentage of Sales	1981(%)	1980(%)	No. of Ratio or % Points 1981 was High (+) Low (-)
1. Net Sales	100.0	100.0	
2. Material Costs	34.4	33.8	+ 0.6
3. Total Factory Payroll ...	28.6	28.0	+ 0.6
4. Manufacturing Expenses ..	12.0	11.5	+ 0.5
5. Total Cost of Sales	75.0	73.3	+ 1.7
6. Gross Profit on Sales ...	25.0	26.7	- 1.7
7. Non-Mfg. Operating Expense	20.7	20.5	+ 0.2
8. Other Expense/(Income) ..	-0.6	-0.1	- 0.5
9. Total Non-Mfg. Expense ..	20.1	20.4	- 0.3
10. Net Profit Before Taxes	4.9	6.3	+ 1.4

Balance Sheet Data	1981(%)	1980(%)	
11. Total Assets	100.0	100.0	
12. Total Liabilities	36.5	60.3	-23.8
13. Total Net Worth	63.5	39.7	+23.8

Financial Ratios	1981(%)	1980(%)	
Total Costs & Exp/Net Sales	95.1	93.7	+ 1.4
Gross Overhead/Direct Labor	181.0	201.2	-20.2
Gross Overhead/(Direct Labor + Material)	69.8	76.3	- 6.5
Admin. & Gen. Exp/Direct Labor	51.9	57.2	- 5.3
Net Sales/Total Assets	1.67	1.19	+ 0.48
Return on Assets (Before Taxes)	8.2	7.6	+ 0.6

CHART 3 - TRENDS OF 4 KEY RATIOS: SEMI-LOG SCALES



Performance by Geographic Divisions (Tables 4 and 6)

The data in Table 4 indicates that the Southern region, with a NPBT as a percentage of sales of 8.1%, lead all other regions in profitability. This result, however, should be interpreted with extreme caution because it was obtained by averaging the 1980 and the 1981 survey results, as is pointed out in the footnote to Table 4.

The region with the next highest profitability was the MW + W + PC region. With an NPBT/Sales of 6.2%, this region was ahead of both the NE + E + MET + C region and the national average. This achievement was due solely to lower factory payroll expenses. The MW + W + PC region was able to support a marginally higher direct labor expense with much lower supervisory and indirect labor expense.

The companies in the MW + W + PC region outperformed the rest of the country on other counts as well (see Table 6). They had less manufacturing and non-manufacturing overhead per dollar of direct labor, and managed their asset base better. Clearly, these factors are important for profitable operation in an economy beset by recession.

An interesting fact which deserves to be highlighted is that the MW + W + PC region companies are financially leveraged to a much higher degree than are the companies in the NE + E + MET + C region. Whether or not the high debt ratios, which, no doubt, increased the possibility of financial failure during the current recession, motivated the managements of these companies to better economic performance, is of course, a matter for speculation.

The ROA for the Southern region companies was the highest (12.8%), and that of the NE + E + MET + C region companies the lowest (7.3%). The ranking on this performance measure followed directly from the rankings on its two component measures, Return on Sales and Asset Turnover.

Performance by Company Sales Size (Tables 5, 6, 7, 8, and 9)

Companies in the sales category $0-$825,000 were almost as profitable in 1981 (7.5% NPBT/Sales) as in 1980 (7.7%). This was made possible by the fact that reasonable parity with 1980 expense percentages was maintained both within the factory and without. Cost increases of, for example, materials were offset by the decreased expenses for Payroll and Manufacturing.

TABLE 4

COMPARATIVE PERCENTAGE PERFORMANCE

BY GEOGRAPHICAL DIVISIONS

Condensed Operating Statement Data as a Percentage of Sales	1981 U.S. TOTAL %	NE+E MET+C %	S* %	MW+W + PC %	Your Company %
1. Net Sales	100.0	100.0	100.0	100.0	100.0
2. Material Costs	34.4	34.4	39.0	34.8	___
3. Total Factory Payroll	28.6	29.3	24.4	27.1	___
4. Manufacturing Expenses	12.0	12.0	7.2	11.3	___
5. Total Cost of Sales	75.0	75.7	70.6	73.2	___
6. Gross Profit on Sales	25.0	24.3	29.4	26.8	___
7. Non-Mfg. Operating Exp.	20.7	20.6	21.2	20.9	___
8. Other Expense/Income	-0.6	-1.0	0.1	-0.3	___
9. Total Non-Mfg. Expense	20.1	19.6	21.3	20.6	___
10. Net Profit Before Taxes	4.9	4.7	8.1	6.2	___
Expense Detail as a Percentage of Sales	%	%	%	%	%
Factory Payroll - Item 3					
3a. Direct Labor	21.6	21.3	13.6	22.5	___
3b. Supervision & Indirect	7.0	8.0	10.8	4.6	___
% Depreciation Incl. in Item 4	15.4	17.2	50.0	13.4	___
Operating Expense - Item 7					
7a. Delivery	3.5	3.5	6.8	3.8	___
7b. Selling	6.0	5.8	1.5	5.8	___
7c. Gen & Administration	11.2	11.3	12.9	11.3	___
% Exec. Salary Incl. in Item 7c	---	29.6	46.4	35.2	___

*The results obtained for the Southern Geographical Division should be interpreted cautiously. The results shown are based on the responses to the 1980 and 1981 Survey. The 1981 data could not be calculated because of an insufficient number of survey respondents in the "S" Division.

The small companies performed better than the national averages during 1981. Their Cost of Sales was 3.4 percentage points lower while their Total Non-Manufacturing Expenses were 0.8% points higher. Consequently, their NPBT/Sales was 2.6 percentage points better than the national average.

Companies in the sales category $825,000-$2,000,000 also did better than the national average; they earned 7.2% NPBT as a percent of sales. The increment over the national average was achieved by these companies by controlling Non-Manufacturing Operating Expenses (NMOE). They held Selling Expenses alone to 3.3 percentage points less than the national average, though they experienced General and Administrative expenses which were 1 percentage point higher than the national average. This performance enabled them to improve upon their 1980 profit performance of 5.4¢ per sales dollar.

Companies in the $2,000,000-$3,500,000 sales category matched the performance of those in the $825,000-$2,000,000 sales category; they too, achieved a 7.2% NPBT/Sales. These companies targeted in-factory costs and limited their Costs of Sales in 1981 to 71.8%, slightly better than their 1980 COS of 72%. However, a better control of NMOE had enabled these companies to earn 7.9% NPBT/Sales in 1980.

The largest companies in the industry, those in the sales category of $3,500,000+, turned in, for the second year in succession, the poorest performance amongst the four sales classifications. During 1981, they averaged a low 1.7% NPBT/Sales. Their COS was 77.2%, higher than the national average of 75% and their own performance of 72.2% in 1980. Similarly, their total Non-Manufacturing Expense, at 21.1%, was higher than the national average (20.7%) and their 1980 performance (20.8%).

The large companies suffered because of their inability to generate enough sales to support their direct labor and total employment. This can be deduced from the direct and net productivity statistics presented in Table 9. The statistics show that sales/employee in both categories increased with company size for all sales categories barring the $3,500,000+.

The large companies were also hurt by their higher manufacturing, delivery and selling expenses. The overhead burden per direct labor dollar and the overhead burden per direct labor and material dollar shown in Table 6 were highest for these companies (and the smallest ones). Selling and delivery expenses together were 2.2 percentage points more than the national average.

Companies in the $825,000-$2,000,000 sales category generated the highest ROA (14.6%) in 1981. They also had the best Asset Turnover (2.02). The largest companies, on the other hand, turned in the lowest ROA (3.3%), a fact attributable to their unspectacular ROS.

Other comparative statistics are listed in Tables 7 and 8. Figures for "Rigid Box" new and used machinery purchased during 1981 are shown in Table 11.

TABLE 5

COMPARATIVE PERCENTAGE PERFORMANCE

BY COMMON SIZE

Condensed Operating Statement Data as a Percentage of Sales	1981 SALES DOLLAR VOLUME 0 to 825M*	825M-2000M	2000M-3500M	3500M+	Your Company
	%	%	%	%	%
1. Net Sales	100.0	100.0	100.0	100.0	100.0
2. Material Costs	32.6	36.5	34.8	34.3	
3. Total Factory Payroll	27.3	28.4	28.0	29.5	
4. Manufacturing Expenses	11.7	10.8	9.0	13.4	
5. Total Cost of Sales	71.6	75.7	71.8	77.2	
6. Gross Profit on Sales	28.4	24.3	28.2	22.8	
7. Non-Mfg. Operating Exp.	22.0	17.1	21.8	21.5	
8. Other Expense/Income	-1.1	0.0	-0.8	-0.4	
9. Total Non-Mfg. Expense	20.9	17.1	21.0	21.1	
10. Net Profit Before Taxes	7.5	7.2	7.2	1.7	
Expense Detail as a Percentage of Sales	%	%	%	%	%
Factory Payroll-Item 3					
3a. Direct Labor	20.2	23.4	20.9	21.7	
3b. Supervision & Indirect	7.1	5.0	7.1	7.8	
% Depreciation Incl. in Item 4	9.7	14.3	19.9	17.9	
Operating Expense-Item 7					
7a. Delivery	3.0	2.2	4.8	4.1	
7b. Selling	5.9	2.7	5.8	7.6	
7c. Gen. & Administration	13.1	12.2	11.2	9.8	
% Exec. Salary Incl. in Item 7c	44.3	35.8	37.6	23.8	
Balance Sheet Data	%	%	%	%	%
11. Total Assets	100.0	100.0	100.0	100.0	100.0
12. Total Liabilities	19.2	31.9	29.0	57.0	
13. Total Net Worth	80.7	68.1	71.0	43.0	

TABLE 6

COMPARATIVE PERCENTAGE PERFORMANCE BY:

	1981 SALES DOLLAR VOLUME					GEOGRAPHIC			
	U.S. TOTAL	0 to 825M	825M-2000M	2000M-3500M	3500M+	NE+E MET+C	S*	MW+W + PC	Your Company
1. Total Costs & Exp/Net Sales	95.1%	92.5%	92.8%	92.8%	98.3%	95.3%	91.9%	93.8%	___
2. Gross Oh'D./D.L. ...	181.0%	196.5%	140.6%	177.5%	194.9%	185.9%	289.0%	162.2%	___
3. Gross Oh'D./ (D.L. + MTL)	69.8%	75.2%	54.9%	66.6%	75.5%	71.1%	74.7%	63.7%	___
4. Net Worth/ Total Assets	63.5%	80.7%	68.1%	71.0%	43.0%	69.4%	--	48.4%	___
5. (Gen. & Admin.)/ D.L.	51.9%	64.9%	52.1%	53.6%	45.2%	53.1%	94.9%	50.2%	___
6. Net Sales/ Total Assets	1.67	1.17	2.02	1.92	1.95	1.52	1.57	1.72	___
7. Return on Assets before Taxes	8.2%	8.8%	14.6%	13.8%	3.3%	7.3%	12.8%	10.7%	___

*Those results shown for the "S" Division represent the average of 1980 and 1981 performance. The 1981 data could not be calculated because of an insufficient number of survey respondents in this particular category.

Items with a -- mark could not be calculated to be representative figures due to the small number of companies responding to the particular survey question.

TABLE 7

MISCELLANEOUS PERFORMANCE RATIOS

ACCORDING TO COMPANY SIZE

	1981 SALES DOLLAR VOLUME				
	0 to 825M	825M-2000M	2000M-3500M	3500M+	Your Company
Inventory Turnover (times)	6.9	6.3	5.7	7.8	___
Labor Turnover (times)..	1.2	1.5	1.7	1.8	___
Collection Period (days)	37.1	30.5	35.3	40.8	___

TABLE 8

AVERAGE NUMBER OF EMPLOYEES

ACCORDING TO COMPANY SIZE

	1981 SALES DOLLAR VOLUME				
	0 to 825M	825M-2000M	2000M-3500M	3500M+	Your Company
Average Number of Employees					
Direct Labor	13.8	28.8	44.3	144.8	___
Indirect Labor	3.3	4.4	10.1	29.0	___
Sales, Administrative and Other	3.5	6.3	8.8	36.3	___

TABLE 9

COMPANY IMAGE STATISTICS

TITLE	RATIOS	1981 SALES DOLLAR VOLUME 0 to 825M	825M-2000M	2000M-3500M	3500M+	Your Company
Direct Productivity	Sales / Direct Labor Employment	$35,440	$38,960	$55,980	$48,157	___
Net Productivity	Sales / Total Employment	$23,770	$28,411	$39,241	$33,194	___
Administrative Load	Gen. & Admin. Expense / Direct Labor Employment	$ 4,630	$ 4,767	$ 6,252	$ 4,723	___
Depreciation Recovery	Depreciation Expense / Sales	1.6%	1.5%	1.8%	2.4%	___
Return on Equity	Net Profit Before Taxes / Net Worth	11.0%	21.4%	19.4%	7.8%	___
Employment Investment	Net Worth / Total Employment	$16,437	$ 9,573	$14,483	$ 7,312	___
Return on Assets	Net Profit Before Taxes / Total Assets	8.8%	14.6%	13.8%	3.3%	___

TABLE 10

END-USE SURVEY OF INDUSTRY SALES

(Percent)

(Millions)	1973	1974	1975	1976	1977	1978	1979	1980	1981
Textiles Apparel & Hosiery	9.5	4.9	7.5	3.7	4.8	7.3	4.5	4.4	5.5
Dept. Stores & Specialty Shops	14.5	10.1	9.9	10.7	10.6	10.1	8.3	6.8	7.1
Cosmetics & Soaps	4.4	3.9	1.8	5.3	5.1	3.3	4.3	5.5	3.9
Confections	10.0	9.8	13.3	10.5	8.1	9.0	15.7	12.6	18.0
Stationery & Office Supplies	7.6	10.4	9.7	12.5	13.2	11.8	15.0	13.5	9.3
Jewelry & Silverware	8.7	8.6	5.2	4.2	14.0	10.7	7.6	9.3	9.7
Photographic Products & Supplies	2.3	3.2	2.2	2.4	2.7	3.0	3.5	4.5	4.3
Shoes & Leather	6.7	7.5	4.8	1.3	1.1	3.7	0.4	0.3	0.2
Drugs, Chemicals & Pharmaceuticals	7.3	7.8	6.9	9.3	7.3	4.9	13.1	7.5	7.8
Toys & Games	2.5	1.1	2.3	3.3	2.6	2.1	1.4	1.4	1.8
Hardware & Household Supplies	4.6	7.7	7.0	6.4	6.2	5.4	3.4	5.5	4.0
Food & Beverages	1.1	1.2	2.9	3.6	0.3	2.9	5.4	4.3	3.9
Sporting Goods	1.6	1.4	1.9	0.7	1.0	1.2	1.7	1.2	1.2
Other Major Customers (A)									
(a) Electronics		2.3	3.4	4.2	2.6	2.9	4.3	3.6	3.5
(b) Educational		4.8	3.9	3.9	6.5	5.2	3.8	3.7	4.4
(c) Other		10.5	12.2	5.6	7.1	10.7	1.1	8.4	7.0
Misc. Customers	19.3	4.8	5.1	12.4	6.8	5.8	6.5	7.5	8.4
	100%	100%	100%	100%	100%	100%	100%	100%	100%

TABLE 11

RIGID BOX NEW & USED MACHINERY PURCHASED

	1981		
Sales Size	Total	No. of Co.'s*	Avg. per Co.
$0-825M			
New	$ 95	1	$ 95
Used	$22,000	1	$22,000
$825M-2000M			
New	$ 725	1	$ 725
Used	$21,300	3	$ 7,100
$2000M-3500M			
New	$281,342	8	$35,168
Used	$189,430	5	$37,886
$3500M+			
New	$40,658	2	$20,329
Used	$151,474	3	$50,491

*No. of Co.'s = Number of Companies that reported purchases.